is dependent upon the catheter and the bladder is emptied at regular intervals and there is not that overdistension at times, which produces the back pressure in the kidney and the resulting disturbance in blood pressure.

The regular life in this class of cases must be insisted upon regarding exercise, sleep, diet, drink, etc. However, I do not believe where a patient has been more or less accustomed to alcohol all his life that he should be absolutely denied an occasional whisky and water, for the entire withdrawal of stimulants does more harm to his general condition than an occasional drink will do the bladder.

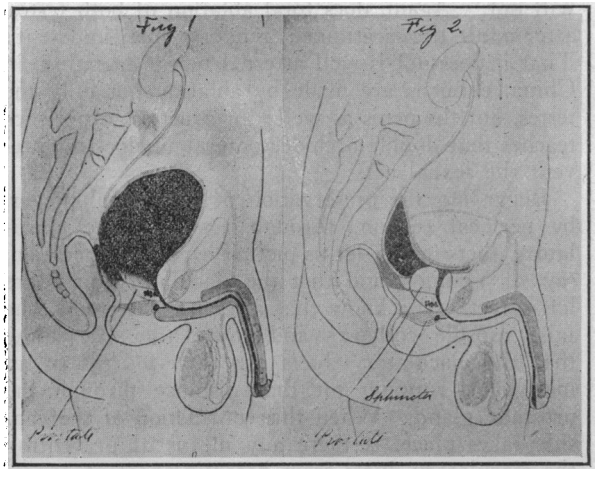
In conclusion I would repeat, give all your prostatic cases a chance with the palliative treatment; if the result is not what you hope, then you can resort to radical procedure, but don't wait too long.

OPERATIVE TREATMENT OF PROSTATIC HYPERTROPHY.

By G. S. PETERKIN, M. D., Seattle, Wash.

I have been asked to present, on Operative Treatment of Prostatic Hypertrophy, an interesting, instructive ten minutes' paper—asked to present such a paper before co-workers, specialists in urologic work. It is indeed a great honor, but it is not with pleasure, but timidity that I accept the task—knowing my inability. Your program committee has, however, made the paper interesting, by setting the time limit.

Enlargement of the prostatic gland, per se, is not the cause of the symptoms of prostatism; it is the extent of obstruction produced to the outlet of the bladder, plus or minus microbic infection. The obstruction is mechanical, so it requires mechanical means to remove it—operation; therefore, operative treatment for prostatic hypertrophy is *not* the *radical* treatment of this pathologic condition, but the *rational*. That the obstruction is mechanical, you can see, by comparing these two diagrammatic drawings: Fig. 1, shows the position of the bladder



outlet—prostate normal; Fig. 2, prostate enlarged; urethra elongated; outlet, elevated. The bladder contracting, outlet is closed mechanically, by bladder wall; a pool of urine remains the focus for

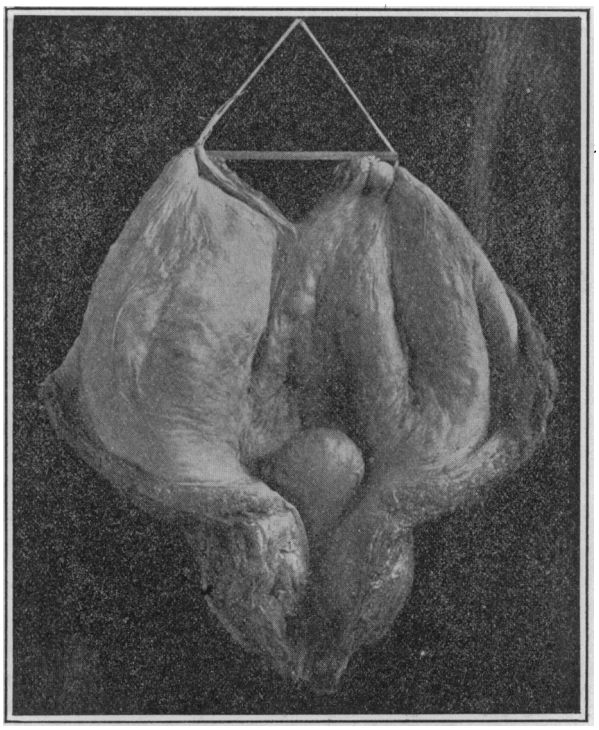


Figure 3.
A middle lobe enlargement of prostate.

microbic infection—size of pool (amount of retention) depending upon the size and character of the prostatic enlargement.

In the early history of Oophorectomy—ovaries diseased—total enucleation; to-day, we have conservation of ovarian tissue.

All forms of prostatic enlargement are not the same. You have all seen this form of enlargement (Fig. 3). Why not remove this lobe, as you would a bladder tumor; excise the pedicle; close the suprapubic wound; have complete recovery from operation—that is, a well patient, in practically six days; do rational, conservative, prostatic surgery?

In prostatic hypertrophy, as previously stated, we have various forms of enlargement. We have complications—for instance, calculi, sacculations, as diagrammatically illustrated in Fig. 4, drawn from a pathologic specimen, etc. We have conditions simulating prostatism. Four months ago, I was asked to operate for prostatic hypertrophy, a similar diagnosis having been made by five physicians—accepted the diagnosis; saw the patient on the operatnig table; opened the bladder, suprapubically. My findings, a papilloma the size of a small pigeon's egg, attached by a pedicle, one-half inch long, to the left side of mouth of bladder, anterior to left ureteric opening, acting as a ball valve; prostate, normal. Conditions like this may simulate prostatic hypertrophy, as well as contracture du col, etc., so the surgeon who is going to give not only a correct prognosis and advocate logical after treatment, but also do accurate as well as conservative surgery, on the prostate, must know the exact existing conditions previous to operation. In other words,

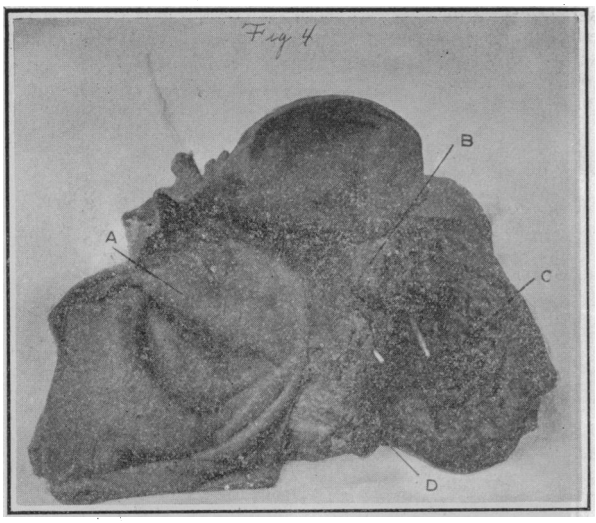


Figure 4.
A. Center of sacculation.
B. Opening of same into bladder.
C. Contracted bladder.
D. Prostatic urethra.

a thorough cystoscopic examination is indicated in every possible case of prostatism on which the cystoscope can be used.

Experience is the best teacher, as to whether the operation should be suprapubically or perineally performed. If a man have expert teachers and a free clinic to draw from, I might advise him to do perineal prostatectomy; if, however, he has limited experience and desires to give every patient upon whom he operates the best possible results, I advise suprapubic prostatectomy. Suprapubic prostatectomy will give as limited a mortality as does perineal and it will give a larger percentage of complete recoveries—that is, without incontinency, than will perineal prostatectomy in the hands of a man who operates on the prostate infrequently.

Two Points in After Treatment. First: Chronic cystitis itself will cause retention. Most prostatics operated upon have chronic cystitis. The first stage of chronis cystitis, pathologically, is hypertrophy of the muscular fibers from overwork; the second, sclerosed hypertrophy; the third, atrophy.

This signifies what? That after a successful, either perineal or suprapubic prostatectomy, chronic cystitis having existed, irrigation of the bladder, with a stimulating and antiseptic solution by the patient himself, under hydrostatic pressure, performed psychically, will be of immense benefit, in increasing the bladder capacity and if continued for a consederable length of time, will increase the percentage of complete recoveries.

By psychic irrigation of the bladder, under hydrostatic pressure, I mean that the patient be taught, as every patient can be taught, to permit the fluid to enter his bladder by voluntarily opening the compresser urethrae muscle, instead of forcing it by hydrostatic pressure, beyond this muscle; then irrigation of the bladder is not harmful, but beneficial and will accomplish results aimed at.

Second: After operation, cystitis still existing (it usually does), use not only psychologic hydrostatic irrigation, but autogenous vaccines, which are beneficial, especially if the infection is due to the bacillus coli.

What has been the bugaboo that has prevented the advance—and it does even to-day—of prostatic surgery, especially prostatectomy, and makes many a man with an enlarged prostate suffer continual pain, be a burden to himself and others? Is it the fear of operation alone or is it the fear of the loss of his sexual power; or that people will think he has lost this power?

One man in this country, Dr. Hugh Young, has made an international reputation for perineal prostatectomy; made it the operation of election. Is it an operation of election, because this operation is less dangerous and difficult to perform, or is it the belief that the ejaculatory ducts are preserved—therefore, the sexual power? It is, in my opinion, this latter belief that the sexual power is retained; and this fact, more than any other, has given perineal prostatectomy its present status; but there is Freyer, with international reputation, who performs only suprapubic prostatectomy and makes a report of 600 cases which ends with these words, "Further, there is no diminution in the sexual power after operation."

What is the true inwardness of all this? Is the sexual power retained or has our knowledge of the part played by the testes in the sexual act been at fault? Let us consider some practical facts of general knowledge: First and foremost, the sexual power is much more psychical than physical. Secondly, daily, we see men who have double epididymitis, whom we know are sterile. Are they impotent? No. Seldom. By disease, the canal of the vas is closed mechanically and the testicular secretion is cut off. Mechanically, by prostatectomy, the testicular secretion may be cut off by closing the ejaculatory ducts. Why should a clean mechanical obstruction cause impotency, as against obstruction produced by disease? In my opinion, it will not, Again, does total ablation of both testes, after adult life is attained, render a man impotent? That it does not is well attested by the fact that, in China, eunuchs are made by ablating not only the testes, but the penis as well; for practical experience teaches that double orchidectomy alone does not prevent the sexual act.

Regarding the preservation of the sexual power, by perineal section, through retaining the ejaculatory ducts intact, let us picture a perfect operation, say, of Young's, and that the ejaculatory ducts are left intact. We know that after prostatectomy, the false capsule collapses and contracts. We know that the ejaculatory ducts are three-fourths of an inch long, running for that distance through the prostatic gland. When this contraction of the capsule takes place, is there any means of preventing the ejaculatory ducts from becoming so tortuous as to close the canal or the fibrous contraction that takes place, from mechanically obliterating their lumen? Who can say it does not? Freyer does not protect them; Goodfellow, who does perineal prostatectomy, does not protect them, and yet, both claim

that the sexual power is retained; but if the lumen of the ejaculatory ducts is obstructed, by either suprapubic or perineal prostatectomy, does obstruction of ducts cause impotency? We know it does not.

Taking into consideration the facts mentioned, is it the psychical belief that he is not impotent, or the fact that the ejaculatory ducts remain patent that causes a patient whose prostate is removed to continue to be potent? Personally, I do not think the patency or lack of patency of the ejaculatory ducts has anything to do with it. The retention of sexual power is due to a psychical suggestion and the man possessed of the belief in himself, in his sexual power, and that it will be retained, will not be impotent, and he who does believe he *will* lose this power, *will*.

This being a fact, it is our duty to teach that prostatectomy will not unsex; it is our duty, for the sake of the patient, so that when this operation is necessitated (suprapubically or perineally), the patient will retain his self respect and not fear that he will be "Oslerized" by either the suprapubic or perineal route; believing in his potency, he will retain power of initiation and be of value in the world's activities.

I repeat, in conclusion, operate for prostatic hypertrophy; operate conservatively, when possible; use a cystoscope before, hydrostatic irrigation and autogenous vaccines afterward; teach that prostatectomy, either suprapubic or perineal, will not unsex.

Discussion.

Dr. J. C. Spencer, San Francisco: I have thought many times when taking part in the meetings of the Pacific Coast Branch of the American Urological Society, that the nub of this situation depends really upon how much was intended for the man doing urological work occasionally. The gentlemen whom we have heard read papers this afternoon have all handled their subjects well. The time has been too limited to cover the ground very thoroughly. I would like to bring out certain facts upon which they have already laid stress, and one is, for the occasional urologist to go slowly. If he is afraid or not sure of his ground, let him keep his hands off. Injudicious medication is so frequently complicatory of conditions which might have been handled differently at the outset, avoiding the distressing symptoms that some enthusiast, not fully cognizant of the possibility of over treatment, may cause, thus complicating the situation. Then the patient is eventually turned adrift or some urologist is asked to see the patient, and finds the situation complicated and the prospect of early relief from the symptoms removed. Dr. Vecki's remarks, that no solution too strong to be used in the eye should be used in the urethra is a piece of concentrated wisdom. I think few of us realize the individual susceptibility of our patients. Some people are intensely intolerant of nitrate of silver solutions. In some they produce a tremendous reaction and irritation and an over sensibility which ties one's hands for future treatment, and the results are unsatisfactory. The points brought out with regard to routine examination of all cases of acute prostatitis are very valuable ones. I think that every man who presumes to treat a gonorrhea is derelict in his duty if he does not go over the individual methodically and also examine his prostatic secretion. Unless one is reasonably skillful with the use of the finger (and I wish here to speak of the comfort to the patient if you will use a rubber finger-cot, well greased, when making the examination) in securing the prostatic secretion, you will frequently be misled. It is my experience that one is not easily able to demonstrate the micro-organisms in the secretion, as in long continued cases, the infection is liable to be mixed, and one is not able to find all the organisms. So it behooves you to rely upon the culture method. If a man is derelict in his duty and gives his patient a clean bill of health and that individual depends upon this statement, infection is often carried further. Within the last year one of our colleagues in the East accidentally stumbled across the fact that a staphylococcus bacterin used in the case of an individual who had a joint affection, without the gonococcus being demonstrated, (although he was known to have gonorrhea)—that the staphylococcus bacterin cleared up the symptoms immediately. I think that is a valuable hint for future experimentation. Statistics have been mentioned to you, the experiments made by a number of experimenters have been published. It is easy to present statistics, but they depend largely upon the man presenting them and the material from which they are collected. The statistics are too fragmentary and too widely scattered to be wholly convincing. With regard to the treatment of prostatic hypertrophy in a conservative way, Dr. McConnell's recommendations are practically the best that can be followed. In order to spare your patient as much as possible. A most careful painstaking instruction should be given him with regard to the cleanliness of his urethra and buadder and catheter. This will save much trouble. Cleanliness is essential. The comfort which the old man can get from conservative treatment and the sparing him the dangers which may follow operation, are greatly to be desired. In the matter of prostatic hypertrophy, a fact of importance is that the men who are doing the most skillful work and whose results are occasionally published to the medical world, all lay down an axiom, **the necessity for routine cystoscopic examination.** I wish to emphasize the point here that every one is not capable of making cystoscopic examinations. Gentleness is essential, also experience and the ability to translate what one sees. The average practitioner thinks he can insert the cystoscope, but it is not always as easy as it looks. An instance of the difficulties in this work was illustrated in the case reported by Dr. Peterkin of the papilloma in the bladder where a cystoscopic examination would have revealed the condition. With regard to operative treatment, the two men who have done more of this work than all other operators in the world, are Freyer and Young of Baltimore. Freyer is the chief high priest of the suprapubic method, and Young of the perineal operation. Personally I prefer Young's method, leaving the suprapubic route for selected cases. There are individuals who have enlargement of the middle lobe of the prostate in whom all that is necessary is to remove the middle lobe and then the Freyer method is the better. I would like to agree with Peterkin as to the potency in these cases, but the fact remains that these individuals who have had the ejaculatory ducts removed are the individuals who develop impotentia coeundi, and while I do not dispute the statement of Freyer, as to the potency of his operated patients, I would prefer the evidence at first hand from the patients. There are many men whose prostates become hypertrophied early in life but it is a cruel wrong to those requiring operation to deprive them of their potency by an operation, which does not spare the ejaculatory ducts.

Dr. Henry Meyer, San Francisco: I would like to make a few remarks in regard to the diagnosis of prostatic hypertrophy. In regard to the bimanual examination, mentioned by Dr. Krotoszyner, you can never determine with any degree of accuracy the size of the prostate. With the rectal examination alone, you get little information in some cases. Sometimes, per rectal examination, we find no enlargement at all, while on cystoscopic examination we find the prostate extending into the bladder,

causing great obstruction. Again we find large prostates where the patients have no symptoms at all. The best way to get the exact size of the prostate is by measuring the antero-posterior diameter, with the use of the instrument invented by Dr. Francis R. Hagner of Washington, D. C. It has a beak like a cystoscope and depressions in the shaft of the instrument, and with a finger in the rectum you can measure off the depressions. This is a very accurate way of determining its diameter. Again we have prostatic hypertrophy with little increase in the size of the organ, but the prostatic urethra is almost obliterated from pressure upward. That variety is very materially benefited and often cured by complete dilatation of the posterior urethra. In regard to the operative treatment for prostatic hpyertrophy, I do not believe any urologists to-day would remove the whole prostate if there was a small lobe with a pedicle, and as far as the different methods are concerned, there is no question but that, while one man prefers the suprapubic and another the perineal, the average urologist who does not have a great number of these cases would do better by selecting the suprapubic route. He sees then pretty much what he is doing and feels everything, the drainage is longer, the flabby bladder regains its muscular power to a great extent and much more perfect than in the average perineal operation. One variety of prostatic hypertrophy, where we find an obstructive band at the neck of the bladder, can be cured by the Bottini incision. This has not been mentioned and most men think it an operation of the past. I do not believe so, particularly in that class of patients where we merely have the band to deal with. If we use the prostatometer of Hagner for measuring the antero-posterior diameter, we know how far it is safe to burn, so that it is impossible to burn through the capsue of the prostate. Also with the control disc invented by Jacobi for the purpose of ascertaining the exact location of the incision, one is absolutely accurate in incising the most prominent situation. This is a most valuable procedure, and it will come into prominence again.

Dr. R. L. Rigdon, San Francisco: There are two or three points upon which I wish to touch, although they have been mentioned already. One statement made on the paper on prostatitis, I believe to be overdrawn. Dr. Vecki makes the claim that when the prostate once becomes infected it is practically never relieved of the infection, and further that the gonococcus is the offending agent in nearly all of these cases. In other words, the man who has once had gonorrheal prostatitis should be forbidden marriage. I believe that the experience of nearly every man who has done a good deal of work in urology is that in a proportion of these cases marriage may be permitted without danger to the wife or the prospective children. No one will go further than I, in discouraging marriage where such advice is necessary, but each case should stand upon its individual merits and not be decided by a general law.

Another point: Dr. McConnell advised that the catheter should be used in all cases of prostatic hypertrophy where possible. I think that we have all come to feel that a dogmatic statement is very apt to miss the mark. To say that all cases of prostatic hypertrophy should be given trial with the catheter, is not stating the matter as it should be stated. Every patient should be investigated very carefully, and some patients be given the benefit of catheter life. The majority of patients that are put upon the use of the catheter, should be so treated until they can be operated upon. I believe that the goal toward which our efforts should be directed should be the removal of the prostate by surgical measures. Another question is what operation should be done. There seems to be a tendency to say that this or that operation should be done regardless of the condition of the patient or the prostate. It seems to me the rational thing to do is to first determine what the general condition of the patient is and then be guided in the selection of our operation by what we find. In my experience the perineal route as advocated by Young is by far the best in a large number of cases. By this method when properly performed we can absolutely control what we are doing for the whole field is plain before the operator and he can leave or remove whatever he chooses. The functional results are remarkably good.

Dr. C. D. Lockwood, Pasadena: With regard to Dr. McConnell's paper on the conservative treatment of prostatitis, I wish to cite some difficulty which I recently had with a case. Up to two months ago I could say that I never had any serious results from catheterization in determining the amount of urine. The case was a man of 76 with a large amount of residual urine. After he had passed all the urine he could, I catheterized him, but first found that I was unable to pass a soft rubber catheter and then used a Mercier which had been sterilized and withdrew about a pint of residual urine, but still left a large quantity in the bladder. I found upon examination that the bladder was loaded with albumin and urged the patient to go to the hospital where I wished to establish a suprapubic drainage. The patient refused to go to the hospital and I heard nothing further from him for three days. Meanwhile he had called another physician, after having had a chill. He had passed urine which this physician had found contained a large quantity of albumin. I was called in consultation and I went not knowing that this was the same man I had seen. He was in a state of uremia and we did a suprapubic operation and drained the bladder. The man died six days after the first catheterization, from uremia. I believe that the first emptying of that bladder and the neglect for the following three days, precipitated the uremic condition and caused death. I think in the future I shall refuse to take the responsibility unless the patient will consent to go to the hospital. I also wish, in connection with this, to emphasize the importance of drainage prior to prostatectomy. A number of cases which I have seen, I have had where I have first done a suprapubic drainage preceding operation. With regard to the potency in these cases. I will speak from the experience of about 50 prostatectomies. I am convinced that a man is rarely ever potent after his prostate is completely removed and the ejaculatory ducts are closed. I believe that the pleasurable sensations come from the ejaculatory ducts. I believe that spermatozoa and the prostate are essential and I do not believe it is possible to completely remove the prostatic gland and preserve potency.

Dr. G. L. Eaton, San Francisco: I have been very much interested in the papers read here to-day. All of these papers related to prostatic hypertrophy and prostatectomy and I failed to hear any mention made of the after results which we often find after prostatectomy. Of the many men who have done this operation, who will be able to say he has had the same condition existing after that he had previous. I remember one case where the prostate was removed and the canal freed. There was no reason why there should be any residual urine, but there occurred a vesical paresis. We must take into consideration the nerve supply of the prostate. If your bladder has been dilated or contracted by this prostate gland, a certain amount of paresis takes place or an atrophied condition of the muscles, and a great number of these cases are going from bad to worse. With regard to the infected prostate and the use of stock vaccines, I have given some attention recently to the making of the autogenous vaccines made from all the bacteria grown from the prostatic secretion. I thoroughly sterilize the urethra and the glases in which I select the secretion, which I collect by massage. I then inoculate a tube of medium and place it in the incubator and from the different bacteria which grow I make an autogenous vaccine and inject my patient. I have

noticed very remarkable results. Of course, this treatment is at the experimental stage. I do not use a specific autogenous vaccine of one organism, but a vaccine made up of all the bacteria which grow.

Dr. Louis Gross, San Francisco: I have been very much pleased to hear these papers upon this subject. I think that the statement made by Dr. Vecki that we are oftentimes unable to rid the prostate, is well taken. All practitioners have found this to be the case time and time again. A case can be treated for years and still the condition continues. I hope that at some time, and probably in the near future, we will be able to do something with the autogenous vaccine. There are prostates that will not clean up. With regard to acute prostatitis, I desire to mention a case of an individual who had an acute gonorrhea with an acute prostatitis. The prostate was enlarged considerably and there was considerable pus there. No treatment of the posterior urethra availed. The epididymis was involved. I have in some cases, although this one did not show a sufficiently high leukocyte count, done an epididymotomy. I placed this man in the hospital for ten days. The temperature rose and also the leukocyte count. In examination per rectum we found the prostate almost ready to break, and the other physician examining with me wondered how we could get rid of such a prostate. I told him that oftentimes an epidilymotomy relieved these cases, and after having done this operation, it was wonderful the way in which the prostate went down. With regard to the use of the rubber catheter, we often have difficulty in introducing it. I have noticed in a recent catalogue a soft rubber catheter bicoudé, which is preferable to the silk bicoudé catheter in the hands of the old prostatic. Regarding the suprapubic and perineal operations, I have seen operators by perineal route who had patients suffering from incontinence for years. There is nothing worse for the specialist than a patient going around with a urinal. For a man who has a limited number of prostatectomies, the suprapubic is the preferable method. There are certain indications for the perineal operation but I think that in 75 per cent or 85 per cent the easiest method is the suprapubic.

Dr. W. P. Willard, San Francisco: I do not think we are justified in drawing any conclusion from one examination or inoculation in infections of the prostate. Dr. Cowden and I have been doing some of this work and we find in every case there are staphylococci present which grow very rapidly and are apt to outgrow all the other bacteria. We might get a slow growing streptococcus, which we may lose entirely if we are not most particular about it. That is also true with the colon bacilli. I do not think we are justified in giving vaccines or drawing conclusions until we have repeated our experiments several times.

Dr. A. J. Zobel, San Francisco: Much has been said about the presence of colon bacilli in the prostate but nothing has been said as to how they gain entrance there, nor has any mention been made as to the methods used. We understand how the gonococcus finds entrance and also the staphylococcus and the streptococcus, but it is through some lesion of the mucous membrane of the rectal wall, which is contiguous to the prostate, that the colon bacilli gain entrance. Ware of New York has found that the bladder is often infected through some lesion of the rectal mucous membrane and it strikes me that the general interest displayed in this line of work should induce an investigation of the rectal mucous membrane before there is an endeavor made to cure the case by autogenous vaccines. It is far better to find the point of entrance of the infection and make some attempt to heal that, than permit the keeping up of the infection after the using of the autogenous vaccines. I would suggest that in the future, where the colon bacillus is the principal bacterium found, the lesion of the rectal mucous membrane should be looked for.

Dr. M. Silverberg, San Francisco: In connection with the paper on operative treatment of the prostate, I was rather surprised to hear advocated partial prostatectomy. That is the old McGill operation which in the early treatment of prostatic surgery was found to be useless, inasmuch as it might relieve symptoms for a short while but subsequently the enlargement of the lateral lobes again produced obstruction. In the surgical treatment the gland must be removed as a whole, if it is to be removed at all. In connection with the infecting organisms in prostatitis, I wish to mention a case of proteus infection which I saw. The organism appeared in large numbers in smears made from the prostatic secretion and was subsequently cultivated. The source of the proteus I do not know as yet, but think it very likely from the rectum.

Dr. G. S. Peterkin, Seattle: One point which I would like to bring out is with regard to the after treatment of these cases. The operation is supposed to cure and most surgeons, as soon as the operation is over, leave the patients to themselves. This is wrong for people who have had their prostates removed need looking after for six months or a year. They should be taught to irrigate themselves with warm solution and you will be surprised to find how the bladder will improve under this treatment. If you will do this you will have cases in which there will not be retention of urine. Another point is with regard to using the Bottini. I do not believe it will ever be revived. If the band remains, the simplest thing would be the Young method of punching a hole through the projecting mucous membrane. It is not so apt to cut and do damage as is the Bottini knife. Another point is that the suprapubic route is the simplest one and the least dangerous. Mention has been made that a man should select his cases. A man who operates infrequently is incapable of selecting his cases, therefore the least danger lies in the less complicated suprapubic route. In closing the wound I use only four silk gut sutures, three in the upper part of the wound and one to go through the drainage tube itself. I stitch the peritoneum back so that it will not be infected. Men who operate infrequently cannot safely adopt the preineal operation and moreover the general practitioner in the country has not the proper assistants. The suprapubic operation can be done by one man. In regard to strong injections being used—it is a good rule for the general practitioner not to use them, but there are cases which cannot be relieved except by using strong solutions.

Dr. M. Krotoszyner, San Francisco: The great majority of the gentlemen who discussed the various papers of the symposium confined their remarks mostly to the treatment of prostatic hypertrophy or, to be more precise, to its operative treatment, while very little or nothing was said upon the many interesting points regarding the etiology and diagnosis of the affection. Owing to the shortness of time at my command I was forced to confine my remarks upon the diagnosis of prostatic hypertrophy merely to a few points which in my opinion, are at present in the foreground of attention, viz: the value of the cystoscope as an aid to diagnosis and the differential diagnosis between simple hypertrophy and malignancy. I would have been glad to obtain some of the experience of my confreres assembled here, especially on the latter point. I have spent a great deal of time and effort in collecting and sifting out the most important publications upon the etiology of prostatic hypertrophy which have appeared in the last five or ten years, and in doing so I have found it very hard to give a somewhat comprehensive review upon the subject in the brief space which, of necessity, could be devoted to the subject in this paper. As regards the treatment of prostatitis I only wish to add one word concerning the treatment with autogenous vaccines. I believe that the value of this

treatment is overrated and in the manner in which it is used at present will not hold what it seems to promise. There will very soon be a reaction setting in against the promiscuous use of this method of treatment. The same is true of the operative treatment of prostatitic hypertrophy which at present is paramount in the minds of surgeons and urologists to the neglect of more conservative measures which certainly in a good many cases yield excellent results.

Dr. V. G. Vecki, San Francisco: I will say in conclusion that I still stick to my condemnation of the strong solutions. While it is frequently necessary to apply strong solutions to certain parts of the urethra—as might be necessary to apply strong solutions to some lesions of the cornea—it must be done as it would be to the cornea, by treating exactly the point necessary and not flooding the whole tract with such a solution. Another point to emphasize, is that, while I claim that a prostate once infected probably never attains its sterility again, that does not mean that such a prostate remains a source of infection. It certainly could not be attempted to keep all prostatics from marrying. If we had a few of them we might try it; but there are millions, and with these millions we must deal. At the same time we have the clinical experience which teaches that the great majority of prostatics do not infect anyone.

Dr. A. S. Lobingier, Los Angeles: I have been reminded in the remarks made this afternoon, of the notable symposium, at which I was present at the British Medical Association in Manchester in 1902, in which Mr. P. J. Freyer, who had just come over from Dublin, was the first speaker. There were two representatives from America present at the time—Dr. Parker Simms and Dr. Samuel Alexander of New York. Sir William Macewen was present also and led in the discussion of the papers. Dr. Stillman's comments a few minutes ago on Macewen's methods, reminded me of his discussion that afternoon. We know that Mr. Freyer has had perhaps the largest experience of any man living, in this line of work, in connection with his service in the British army in India. He is and always has been a very ardent advocate of the suprapubic method of operating on the prostate gland. If you will remember, at the time there was not so much consideration given to that method of approach. It was not received with very much confidence by many surgeons of the world. The American surgeons had preferred the lower approach and it was mostly in favor among the French and German. I think that we must admit that to-day we are a little more discriminating in our choice of approach to the prostate, being governed by the pathological conditions which we find present. No less a man than Mr. Moynihan has followed Freyer's technic and has advocated it strongly. There are many things concerning the surgery of the prostate and the pathological condition of the bladder at the time of a prostatectomy if senile hypertrophy is present, that enter vitally into the subject and upon which the discussions have scarcely touched. Many of these bladders are either extremely anemic from overdistension and from the infection in the mucosa and submucosa, or they are hyperplastic. The musculature has become entirely changed so that if you were to do an ideal prostatectomy, you would not have ideal conditions remaining in the bladder itself. This leads me to say that the operation of prostatectomy is to a large extent a technical apology. It is practically never an ideal surgical operation. If we are to estimate from the results, we are compelled to consider it chiefly a remedial operation, relieving a condition which cannot be relieved in any other way. I have been privileged to observe something of the results of prostatectomies at the hands of the best masters in the world. If many of these cases are observed in after years, however, we find that not only is there atony of the bladder and residual urine, but there is frequently a stricture at the neck of the bladder, resulting in impaired control of the act of urination. That is another class of cases which we see not infrequently suffering from incontinence. I am entirely in accord with the idea that the prostate should be approached with critical reference to the pathological condition which we find in each individual case. In many the suprapubic route is ideal. In other cases the perineum seems to be the route of easiest approach. The point made by Dr. Stillman with reference to the technic of these operations—that many cases are not in a condition to withstand a major operation—is important. This is a major operation in the extreme sense. We frequently have a mixed infection, with pus producing bacteria. It is better in such cases to have a preliminary drainage, whether we are to do the suprapubic incision or the perineal. The point should be emphasized that these patients should be in as good condition as possible for the operation which is to come afterward, an ordeal for which not uncommonly they are all too poorly prepared.

THE IMPORTANCE OF MODIFICATION OF THE SENSIBILITY IN THE DIAGNOSIS OF DISEASE IN THE LIGHT OF RECENT NEUROLOGICAL RESEARCH.*

By TOM A. WILLIAMS, M. B., C. M. (Edinr.), Washington, D. C.

The paper shows:

I. The fallacies which lurk in the current faulty methods of examining the sensibility and how to avoid them, as for example (a) the stimulation of deep sensibility when the observer believes he is investigating the sense of touch; (b) the fault in technic which allows the patient's perception of attitudes to be complicated by kinesthetic impressions while being examined; (c) the methods of avoiding suggesting symptoms to impressionable patients.

II. The paths in which are grouped sensory impulses in the periphery change their arrangement in the cord. The combinations in the *cord* are (a) heat, cold and pain of all degrees and kinds, which run in the heterolateral Gower's column, both intermingled and in close proximity to one another; their decussation, however, requiring for completion 2-8 segments, generally 5 or 6; (b) Unconscious afferent impulses of attitude and tonus, both passing in the homolateral dorsal spino-cerebellar and in the hetero-lateral spino-cerebellar tract; (c) Our conscious sensations of the attitude of our limbs and trunk, however, pass in the posterior column; (d) In the posterior column run also for several segments the impulses subserving touch, pressure, and localization. These, however, eventually find their way to and ascend in the anterior columns.

Thus the gray matter is not the seat of any continuous path as was formerly thought. Many of the foregoing conclusions had been already advanced by Brown-Séquard until physiological experiments apparently contradicted them. They have, however, been re-established by more complete and less faulty clinical examinations, which we owe mainly to Head and his associates.

* American Journal of Medical Sciences, April, 1909.